

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

21. (Currently Amended) A suction unit for a liquid droplet ejection apparatus, said suction unit comprising:

a cap unit;

a supporting member that supports said cap unit;

said cap unit comprising a plurality of adhered caps each including a main body having a concave surface;

a lift mechanism that raises said cap unit to a first position and lowers said cap unit to a second position relative to said supporting member;

a plurality of ejectors that suck function liquid through said plurality of adhered caps; and

a suction tube system that transports the function liquid from said plurality of adhered caps.

22. (previously presented) The suction unit of Claim 21, wherein a seal packing is seated around a peripheral portion of said concave surface.

23. (previously presented) The suction unit of Claim 22, wherein at least one of said adhered caps is adhered to a function droplet ejection head of the droplet ejection apparatus when said suction unit is in operation, said seal packing forming a seal between said adhered cap and said function droplet ejection head.

24. (previously presented) The suction unit of Claim 21, wherein at least one of said plurality of adhered caps are adhered to a function droplet ejection head of the liquid droplet ejection apparatus when said cap unit is at said first position; and
wherein at least one of said plurality of adhered caps are spaced apart from the function droplet ejection head when said cap unit is at said second position.

25. (previously presented) The suction unit of Claim 21, wherein at least one of said plurality of adhered caps further comprises a relief valve.

26. (previously presented) The suction unit of Claim 21, wherein said lift mechanism comprises a first lift cylinder and a second lift cylinder.

27. (previously presented) The suction unit of Claim 21, wherein said suction tube system comprises a plurality of suction tubes, each one of said suction tubes extend between one of said plurality of ejectors and one of said plurality of adhered caps.

28. (previously presented) The suction unit of Claim 27, wherein said suction unit further comprises:

a plurality of function liquid detection sensors that detect the presence of the function liquid in said plurality of suction tubes, each one of said plurality of function liquid detection sensors is disposed between one of said plurality of adhered caps and one of said plurality of ejectors;

a plurality of cap-side pressure sensors for measuring a pressure in said plurality of suction tubes, each one of said plurality of cap-side pressure sensors is disposed between one of said plurality of adhered caps and one of said plurality of ejectors; and

a plurality of cap-side gate valves that open and close said plurality of suction tubes, each one of said plurality of cap-side gate valves is disposed between one of said plurality of adhered caps and one of said plurality of ejectors.

29. (previously presented) The suction unit of Claim 21, wherein each one of said plurality of ejectors comprises:

a supply port connected to an air supply means;

a suction port connected to one of said plurality of adhered caps to direct a suction force to said adhered cap; and

a discharge port that discharges substances that enter said ejector through said suction port.

30. (previously presented) The suction unit of Claim 21, wherein said plurality of ejectors are free of moving parts.

31. (previously presented) The suction unit of Claim 21, further comprising a pump and a three-way valve between said pump and said plurality of ejectors.